

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Canceled)

Claim 2 (Currently amended): A power amplifying apparatus that performs linear amplification by using a nonlinear power amplifier, the apparatus comprising:

a signal converting section that converts an input signal of an orthogonal coordinate system to an amplitude signal and a phase signal of a polar coordinate system, ~~that~~ then corrects the phase signal, ~~that~~ converts the corrected phase signal to an orthogonal-coordinate phase signal of the orthogonal coordinate system, and ~~that~~ outputs the amplitude signal and the orthogonal-coordinate phase signal;

a modulating section that performs orthogonal modulation on the corrected orthogonal-coordinate phase signal, and that outputs the modulated signal to the nonlinear power amplifier; and

a correcting section that outputs a gain control signal for the nonlinear power amplifier, and a phase correction signal that is used in the correction of the phase signal in the signal converting section,

wherein the correcting section has a correction table that is produced on a~~the~~ basis of an output signal of the nonlinear power amplifier and the input signal of the orthogonal coordinate system, and outputs the gain control

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signal and the phase correction signal with reference to the correction table on the basis of the amplitude signal.

Claim 3 (Currently amended): The power amplifying apparatus according to claim 2[[1]], wherein at least one of the signal converting section, the modulating section, and the correcting section is integrated into one chip.

Claim 4 (Currently amended): The power amplifying apparatus according to claim 2[[1]], wherein the correction table stores data that indicate an inverse characteristic of a nonlinear amplification characteristic that is calculated by using an LMS algorithm.